Coleman Spas

Owner's Manual

United States, Canada, and International

Roto Mold Spa

LTR50001116, Rev. E
12/22/14

Important Safety Instructions

Preparing for Your New Portable Spa

- Pre-Delivery Checklist 3
- Planning the Best Location 3
- Preparing a Good Foundation 4
- 120V / 60 Hz Electrical Installation 4
- 240 Volt Electrical Installation 8
- 230V / 50 Hz Electrical Installation 10
- Filling and Powering Up Your Portable Spa . . . 11
- Priming the Pump 13

Operating Your Spa

- TP400 Control Panel Operation 15
- Adjusting Jets 24

Clear Water Plan

- The Key to Clear Water 25
- Testing and Adjusting Spa Water 26
- Sanitation. 27
- Bather Load 28
- Filter Cleaning 28
- Ozonator 28
- Troubleshooting Water Clarity Problems 29

Cleaning and Maintenance

- Removing the Access Panel 30
- Draining Your Portable Spa 30
- Winterizing (Cold Climate Draining) 31
- Jet Removal and Replacement 31
- Cleaning and Replacing the Filter. 32
- Installing Cover Latches 32
- Covering Your Spa. 33
- Cleaning and Replacing the Filter. 33
- Cleaning Your Spa 33
- Maintenance Schedule 34

Appendix

- Replacement Parts 35
- Troubleshooting 39
- Limited Warranty. 42
- Warranty Registration. 46

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LTR50001116, Rev. E
12/22/14
100-1382

CONTACT INFORMATION

For customer service, please contact your authorized dealer immediately. If you need additional information and/or assistance, contact:

LMS Customer Service Department
1462 East Ninth Street
Pomona, CA 91766.

Telephone: 909-623-8781
Fax: 909-629-3890

Important Safety Instructions

READ AND FOLLOW ALL INSTRUCTIONS.

WARNING:

To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

DANGER -- Risk of accidental drowning:

Do not allow children to be in or around a spa unless a responsible adult supervises them. Keep the spa cover on and locked when not in use. See instructions enclosed with your cover for locking procedures.

DANGER -- Risk of injury:

The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings, or the pump, be sure the flow rates are compatible.

Never operate the spa if the suction fitting or filter baskets are broken or missing. Never replace a suction fitting with one that is rated less than the flow rate marked on the original suction fitting.

DANGER -- Risk of electric shock:

Install the spa at least 5 feet (1.5 meters) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently bonded by a minimum #8 AWG solid copper conductor to the outside of the spa's control box.

DANGER -- Risk of electric shock:

Do not permit any external electrical appliances, such as lights, telephones, radios, televisions, and etc., within five feet (1.5 meters) of the spa. Never attempt to operate any electrical device from inside the spa.

WARNING -- To reduce the risk of injury:

The spa water should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.

High water temperatures have a high potential for causing fetal damage during pregnancy. Women who are pregnant, or who think they are pregnant, should always check with their physician prior to spa usage.

The use of alcohol, drugs or medication before or during spa use may lead to unconsciousness, with the possibility of drowning.

Persons suffering from obesity, a medical history of heart disease, low or high blood pressure, circulatory system problems or diabetes should consult a physician before using the spa.

Persons using medications should consult a physician before using the spa since some medications may induce drowsiness while others may affect heart rate, blood pressure and circulation.

HYPERTHERMIA DANGER:

Prolonged exposure to hot air or water can induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level 3°F to 6°F above the normal body temperature of 98.6°F (or 2°C to 4°C above 37°C). While hyperthermia has many health benefits, it is important not to allow your body's core temperature to rise above 103°F (39.5°C).

Symptoms of excessive hyperthermia include dizziness, lethargy, drowsiness and fainting. The effects of excessive hyperthermia may include:

- Failure to perceive heat
- Failure to recognize the need to exit spa or hot tub
- Unawareness of impending hazard
- Fetal damage in pregnant women
- Physical inability to exit the spa
- Unconsciousness

WARNING: The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia.

DANGER -- Risk of electric shock:

- Replace a damaged power cord immediately.
- Do not bury the power cord.
- Connect to a grounded, grounding-type receptacle only.

WARNING: People with infectious diseases should not use a spa or hot tub.

WARNING: To avoid injury, exercise care when entering or exiting the spa or hot tub.

WARNING: Do not use drugs or alcohol before or during the use of a spa or hot tub to avoid unconsciousness and possible drowning.

WARNING: Do not use a spa or hot tub immediately following strenuous exercise.

WARNING: Prolonged immersion in a spa or hot tub may be injurious to your health.

CAUTION: Maintain water chemistry in accordance with manufacturer's instructions.

SAVE THESE INSTRUCTIONS.

Preparing for Your New Portable Spa

Pre-Delivery Checklist

Most cities and counties require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on property to prevent unsupervised access to the property by children. Your dealer can provide information on which permits may be required and how to obtain them prior to the delivery of your spa.

Before Delivery	
	Plan your delivery route
	Choose a suitable location for the spa
	Lay a 5 - 8 cm concrete slab
	Install dedicated electrical supply
After Delivery	
	Place spa on slab
	Connect electrical components

Planning the Best Location

Safety First

Do not place your spa within 10 feet (3 m) of overhead power lines.

Consider How You Will Use Your Spa

How you intend to use your spa will help you determine where you should position it. For example, will you use your spa for recreational or therapeutic purposes? If your spa is mainly used for family recreation, be sure to leave plenty of room around it for activity. If you will use it for relaxation and therapy, you will probably want to create a specific mood around it.

Plan for Your Environment

If you live in a region where it snows in the winter or rains frequently, place the spa near a house entry. By doing this, you will have a place to change clothes and not be uncomfortable.

Consider Your Privacy

In a cold-weather climate, bare trees won't provide much privacy. Think of your spa's surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors as well when you plan the location of your spa.

Provide a View with Your Spa

Think about the direction you will be facing when sitting in your spa. Do you have a special landscaped area in your yard that you find enjoyable? Perhaps there is an area that catches a soothing breeze during the day or a lovely sunset in the evening.

Keep Your Spa Clean

In planning your spa's location, consider a location where the path to and from the house can be kept clean and free of debris.

Prevent dirt and contaminants from being tracked into your spa by placing a foot mat at the spa's entrance where the bathers can clean their feet before entering your spa.

Allow for Service Access

Make sure the spa is positioned so that access to the equipment compartment and all side panels will not be blocked.

Many people choose to install a decorative structure around their spa. If you are installing your spa with any type of structure on the outside, such as a gazebo, remember to allow access for service. It is always best to design special installations so that the spa can still be moved, or lifted off the ground.

Preparing a Good Foundation

Your spa needs a solid and level foundation. The area that it sits on must be able to support the weight of the spa, with water and the occupants who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress that could DAMAGE YOUR SPA SHELL AND FINISH.

Damage caused by inadequate or improper foundation support is not covered by the warranty. It is the responsibility of the spa owner to provide a proper foundation for the spa.

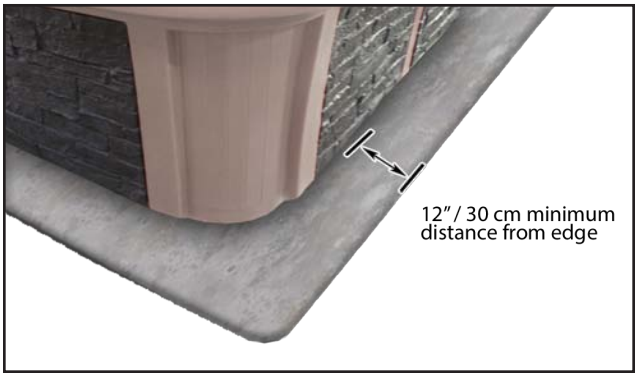
Place the spa on an elevated 3 to 4" / 30 cm concrete slab. Pavers, gravel, brick, sand, timbers or dirt foundations are ***not*** adequate to support the spa.

We strongly recommend that a qualified, licensed contractor prepare the foundation for your spa.

If you are installing the spa indoors, pay close attention to the flooring beneath it. Choose flooring that will not be damaged or stained.

If you are installing your spa on an elevated wood deck or other structure, it is highly recommended that you consult a structural engineer or contractor to ensure the structure will support the weight of 150 pounds per square foot (732 kg / m2).

To properly identify the weight of your new spa when full, remember water weighs 8.33 lbs. per gallon, or 1 kg per liter. For example, an average 8' spa spa holds approximately 500 gallons, or 1892 liters, of water. Using this formula, you will find that the weight of the water alone is 4,165 lbs, or 1892 kg. Combined with the dry weight of the spa you will note that this spa will weigh approximately 5,000 lbs, or 2267 kg, when full of water.



120V / 60 Hz Electrical Installation

This product is a cord-connected spa with a pump heater, lighting fixture, and spa side control. The operating power is 120V AC.

A licensed electrician may be required to upgrade your standard receptacle and/or circuit breaker. Always follow applicable local, state and federal codes and guidelines.

The spa is equipped with a 15 amp GFCI cord and plug kit.

Plug the spa into a dedicated electrical line with a 15 amp breaker.

Always use a weatherproof-covered receptacle. Receptacle shall be located not less than 5 feet (1.5 m) from and not exceeding 10 feet (3.0 m) from the inside wall of the spa (NEC 680.43(A)).

Do not use extension cords. Using an extension cord will void your warranty.

Do not bury the power cord. If your cord becomes damaged, replace it before next usage.

If you need to replace your cord, replace it with a 15 amp GFCI connection. The cord may not be longer than 15 feet (4.6 m). You can order a replacement GFCI and cord kit from customer service, part number ELE09700086.

Location of Electrical Cord

This applies to 120V systems.

The electrical cord is located inside the equipment area and must be removed in order to plug in the spa.

Remove the access panel for the equipment area and set it aside. (Access panel removal is described on page 30.)

Locate the power cord with the GFCI plug. Inspect the cord for damage before use.

Route the GFCI plug through the access hole located in front under the access panel area.

Pull the full length of the power cord (15 feet / 4.6 m) through the access hole.

Replace the access panel. Do not overtighten the screws.

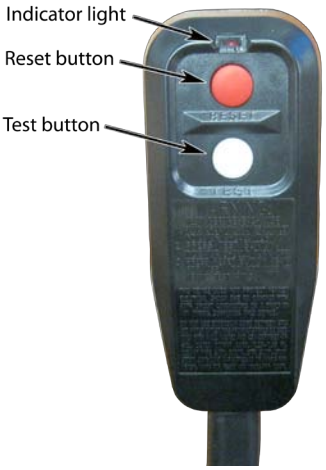
Testing the GFCI

Test the GFCI plug prior to first use and periodically when the spa is powered.

1. Plug in the GFCI into the power outlet. The indicator should turn on.
1. Press the TEST button. The GFCI will trip, the indicator will turn off, and the spa will stop operating.
2. Press the RESET button. The GFCI will reset, the indicator will turn on again, and the spa will turn back on.

The spa is now safe to use.

If the GFCI trips while the spa is in use, press the RESET button. If the GFCI does not reset, unplug the spa and call your spa dealer for service. DO NOT USE THE SPA!

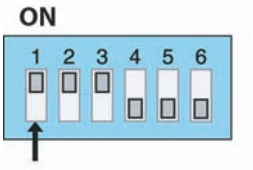


Converting from 120V to 240V

The default factory setting for the BP501G1 system is 120V 60Hz. However, it can converted to 240V by following these steps. Refer to the circuit board wiring diagrams on the next page.

Note: If your spa is under warranty, you must have a qualified spa technician do this.

1. Remove jumper wire from J38 and J42.
2. Change the following jumper connections:
   - Move the wire connecting J50 and J40 to J50 and J48.
   - Move the wire connecting J51 and J54 to J51 and J37.
3. Set DIP switches 1, 2 and 3 to the ON position.

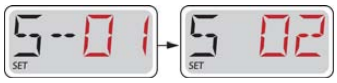


4. Connect 240V to circuit board. See section "240 Volt Electrical Installation" for wiring and GFCI requirements.
5. Apply 240V power to the spa and change the spa's set-up programming as follows:
   a. When the spa begins Priming Mode, press the Warm or Temperature button once to exit Priming Mode. The following message will appear, which will indicate Test Mode:

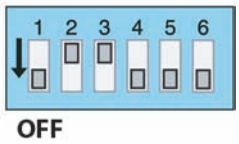
   b. Press these buttons in order:

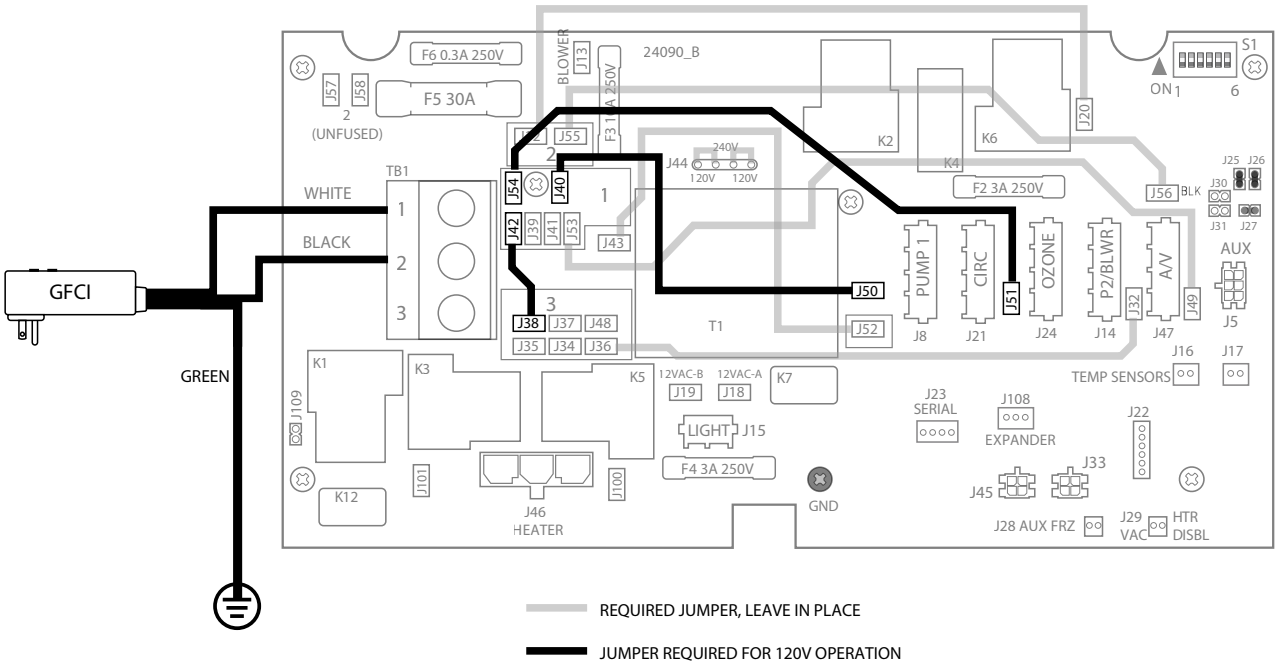
PRESS:	YOU WILL SEE:
Warm	TEMP message flashes
Light	TEST message appears
Warm	SETP message appears
Warm	Current setup appears

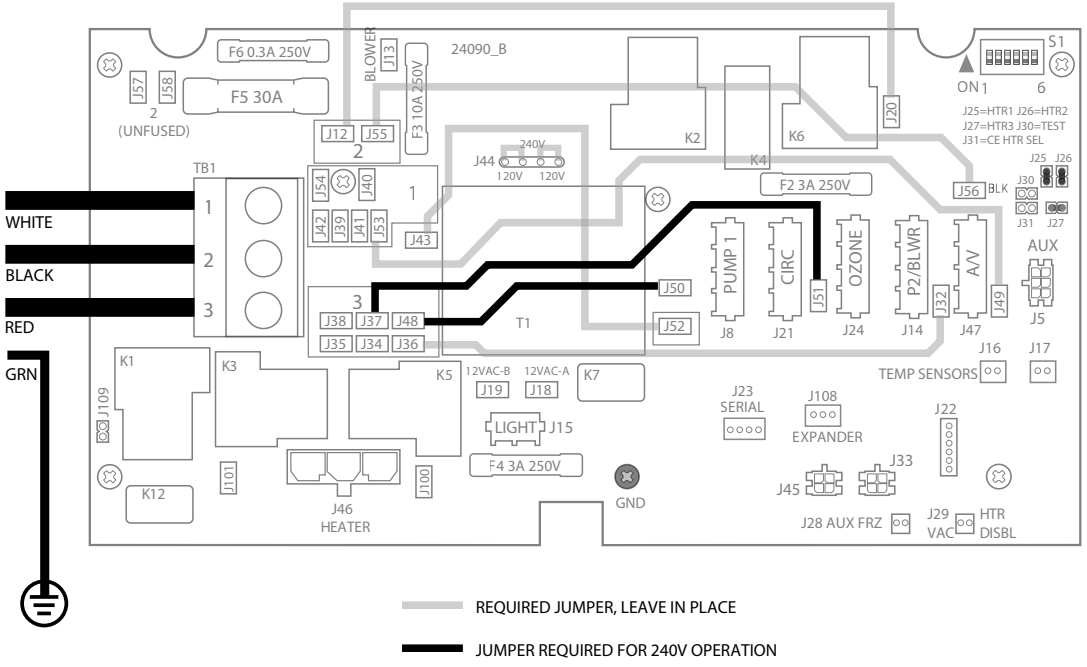
   c. Continue to press the **Warm** button to toggle through the setups available for the control box. Select the appropriate one for the spa's configuration.



   d. Press the Light button the select the setup. The system will begin to reset to accept the new setup.
5. Set DIP switch 1 back to the OFF position.




GFCI
WHITE
BLACK
GREEN
TB1
F6 0.3A 250V
F5 30A
(UNFUSED)
24090_B
BLOWER
F3 10A 250V
S1
ON
J44
240V
120V
120V
F2 3A 250V
PUMP 1
CIRC
OZONE
P2/BLWR
A/V
AUX
TEMP SENSORS
SERIAL
EXPANDER
LIGHT
F4 3A 250V
GND
HEATER
J28 AUX FRZ
J29 VAC
HTR DISBL
REQUIRED JUMPER, LEAVE IN PLACE
JUMPER REQUIRED FOR 120V OPERATION


WHITE
BLACK
RED
GRN
TB1
F6 0.3A 250V
F5 30A
(UNFUSED)
24090_B
BLOWER
F3 10A 250V
S1
ON
J25=HTR1 J26=HTR2
J27=HTR3 J30=TEST
J31=CE HTR SEL
J44
240V
120V
120V
F2 3A 250V
PUMP 1
CIRC
OZONE
P2/BLWR
A/V
AUX
TEMP SENSORS
SERIAL
EXPANDER
LIGHT
F4 3A 250V
GND
HEATER
J28 AUX FRZ
J29 VAC
HTR DISBL
REQUIRED JUMPER, LEAVE IN PLACE
JUMPER REQUIRED FOR 240V OPERATION

240 Volt Electrical Installation

All 240V spas must be permanently connected (hard-wired) to the power supply. See the wiring diagram on page 9.

These instructions describe the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty and may result in serious injury.

When installed in the United States, the electrical wiring of this spa must meet the requirements of NEC 70 and any applicable local, state, and federal codes.

The electrical circuit must be installed by an electrical contractor and approved by a local building or electrical inspector.

Failure to comply with state and local codes may result in fire or personal injury and will be the sole responsibility of the spa owner.

The power supplied to the spa must be on a dedicated GFCI protected circuit as required by NEC 70 with no other appliances or lights sharing the power.

Use copper wire with THHN insulation. Do not use aluminum wire.

Your spa will require one 40 amp GFCI, installed with four #6 AWG copper wires.

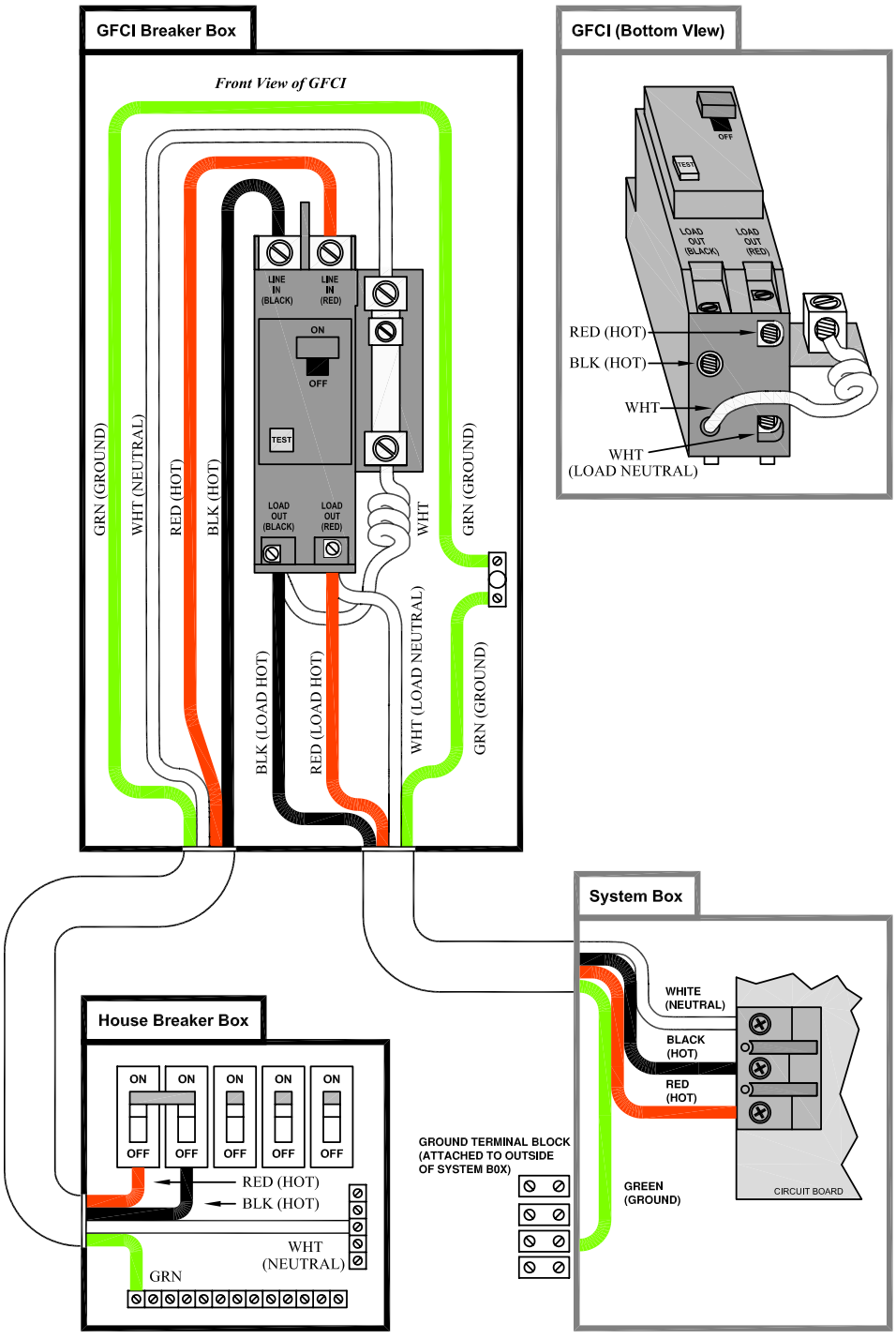
Wire runs over 85 feet must increase wire gauge to the next lower number. For example: A normal 50 amp GFCI with four #8 AWG copper wires run over 85 feet would require you to go to four #6 AWG copper wires.

Testing the GFCI Breaker

Test the GFCI breaker prior to first use and periodically when the spa is powered. To test the GFCI breaker follow these instructions (spa should be operating):

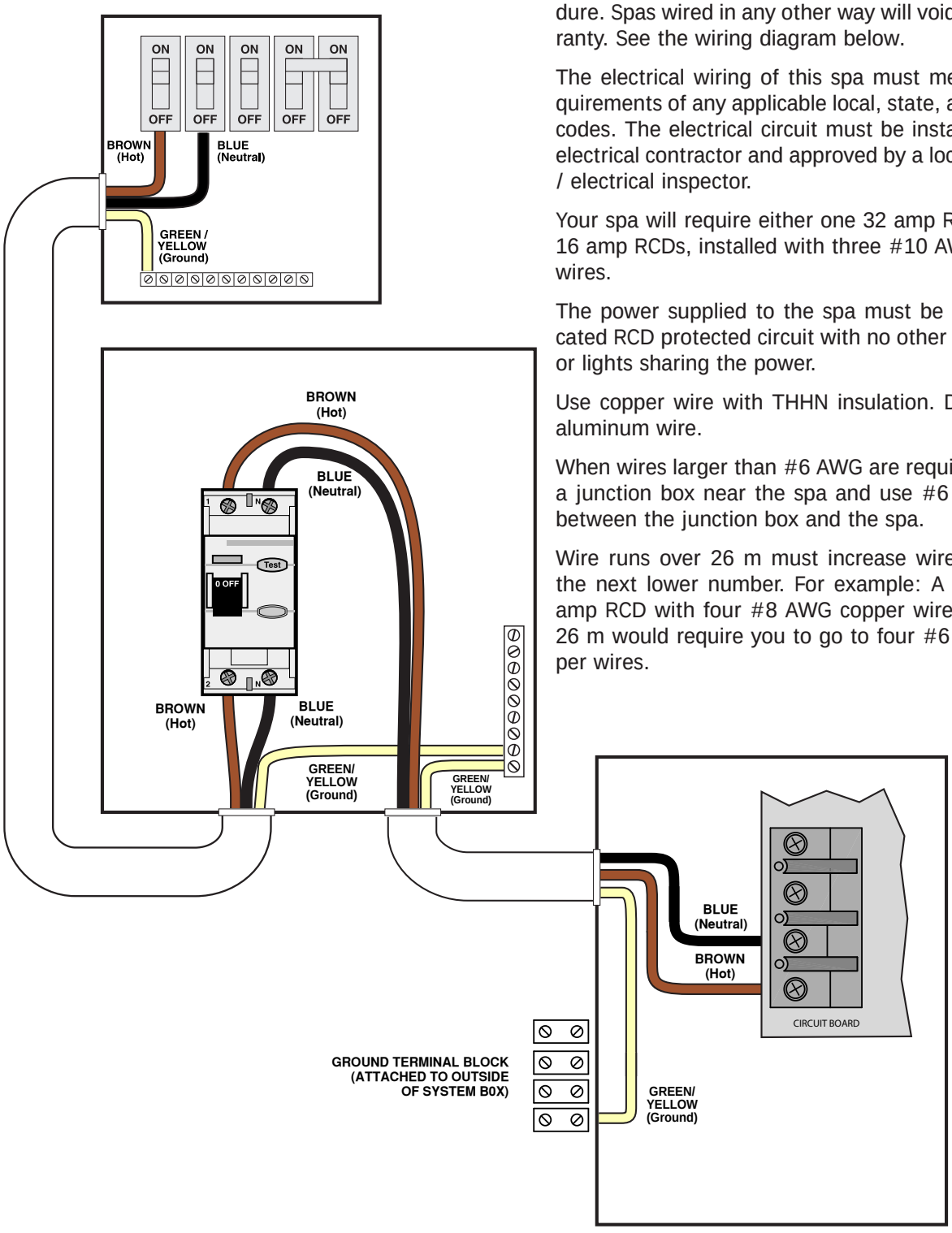
1. Press the TEST button on the GFCI. The GFCI will trip and the spa will shut off.
2. Reset the GFCI breaker by switching the breaker to the full OFF position, wait a moment, then turn the breaker back on. The spa should have power again.

GFCI Wiring Diagram



230V / 50 Hz Electrical Installation

All 230V spas must be permanently connected (hard-wired) to the power supply. These instructions describe the only acceptable electrical wiring procedure.



Spas wired in any other way will void your warranty and may result in serious injury.

This is the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty. See the wiring diagram below.

The electrical wiring of this spa must meet the requirements of any applicable local, state, and federal codes. The electrical circuit must be installed by an electrical contractor and approved by a local building / electrical inspector.

Your spa will require either one 32 amp RCD or two 16 amp RCDs, installed with three #10 AWG copper wires.

The power supplied to the spa must be on a dedicated RCD protected circuit with no other appliances or lights sharing the power.

Use copper wire with THHN insulation. Do not use aluminum wire.

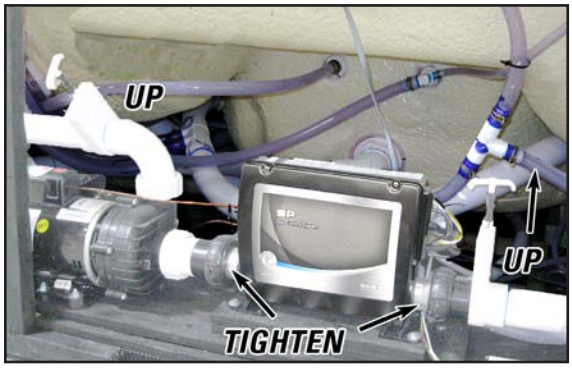
When wires larger than #6 AWG are required, install a junction box near the spa and use #6 AWG wire between the junction box and the spa.

Wire runs over 26 m must increase wire gauge to the next lower number. For example: A normal 50 amp RCD with four #8 AWG copper wires run over 26 m would require you to go to four #6 AWG copper wires.

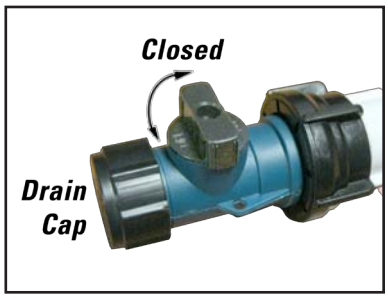
Filling and Powering Up Your Portable Spa

1. Inspect the spa equipment.

Inspect all plumbing connections in the equipment area of your spa.



- Make sure unions in the equipment pack are tight. (Be careful not to over-tighten the plumbing fittings.)
- If your spa has gate valves, make sure they are all in the UP or OPEN position.
- Make sure the drain valve is closed and capped.



Never run the spa with the gate valves closed or without water circulating for long periods of time.

2. Remove the cartridge from filter canister.

Unscrew the cartridge and remove it.

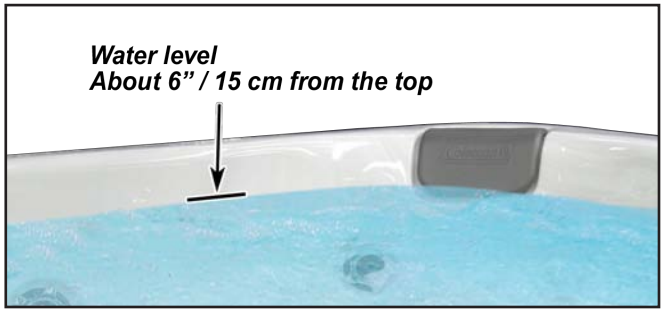
After you remove the filter, remove the plastic wrapper and soak it in water for 30 minutes before you replace it. A dry filter can allow air into the filtration system which can cause the pump to fail to prime.

3. Fill the spa.

Place a garden hose in the filter canister and fill your spa with ***regular tap water*** about six inches / 15 cm from the top.

If the water level is too low or too high, your spa will not operate properly.

Always fill the spa through the filter canister! Failure to do so may cause air to be trapped in the filtration system and prevent the pumps from operating properly.



Never fill your spa with soft water.

Soft water makes it impossible to maintain the proper water chemistry and may cause the water to foam, which will ultimately harm the finish of the spa and void your warranty.

4. Turn on power to the spa.

When the spa is filled to the correct level, turn on the power at the GFCI breaker. (Ensure that the 120V spas are connected to the proper electrical outlet.)

5. Prime the pump.

Your spa will perform a self-diagnostic check and go into Priming Mode. The control panel will display either **RUN PUMPS PURG AIR ---** or **Priming Mode**, depending on which control panel you have.

Do the following:

1. Press the JETS or JETS 1 button once to start the pump in low speed.
2. Press it again to switch the pump to high speed.
3. If you have other pumps, press JETS 2 or JETS 3 to turn them on also.

Running the pumps helps the pumps prime.

After two minutes, the pump should prime. If it does not, follow the priming instructions on the next page. If it does, continue with the next step.

6. Install the filter into the filter canister.

Make sure the filter has soaked at least 30 minutes before you install it.

7. Let the spa heat up.

When the spa has finished priming, the heater will activate.

Put the cover on and let the spa run for two hours.

8. Adjust water chemistry.

After the spa has run for two hours, test and adjust the water chemistry. See the section on page 26 for instructions on water clarity.

Priming the Pump

New spa owners often have difficulty the first time they start their spa and the pump fails to prime. This can be frustrating, but these simple instructions can help you.

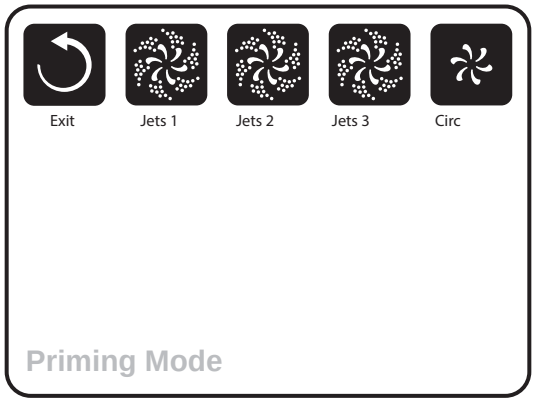
> The pump will not work properly while air is trapped in it. Continuing to operate the pump in this way will cause damage.

Sometimes air can become trapped in the pump while filling the spa. You will know this has happened when after you have filled and started the spa, the pump does not seem to function. You will hear the pump operating, but no water will be moving.

Starting Up: Priming Mode

After the initial start-up sequence, the spa will enter Priming Mode, which lasts 4 to 5 minutes. Depending on your control panel, one of the messages shown at right will appear.

As soon as the Priming Mode screeen appears on the panel, press the Jets or Jets 1 button once to start Pump 1 in low speed and then again to switch to high speed. Also, select the other pumps, to turn them on. The pumps should be running in high speed to facilitate priming.



If the pumps have not primed after two minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process. Note: Turning the power off and back on again will initiate a new pump priming session.

Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than five times. If the pumps will not prime, shut off the power to the spa and call for service.

Important: A pump should not be allowed to run without priming for more than two minutes. Under NO circumstances should a pump be allowed to run without priming beyond the end of the 4 to 5 minute priming mode. Doing so may cause damage to the pump and cause the system to energize the heater and go into an overheat condition.

Exiting Priming Mode

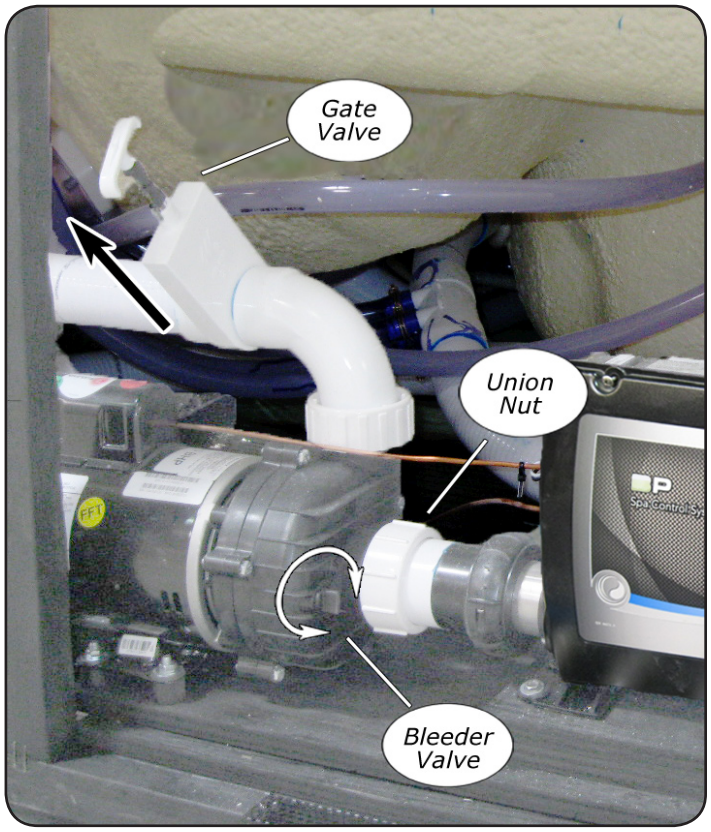
You can manually exit Priming Mode by pressing an Up or Down button. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4 to 5 minutes. Be sure that the pumps have been primed by this time.

Once the system has exited Priming Mode, the top-side panel will momentarily display the set temperature but the display will not show the temperature yet. This is because the system requires approximately one minute of water flowing through the heater to determine the water temperature and display it.

Bleeding Air from the Pump

If you have tried priming the pump several times unsuccessfully using the control panel, you can bleed the air from the pump manually.

1. Shut off the power to the spa.
2. Using a Phillips screwdriver, remove the front panel from the spa and locate the pump.
3. Close the gate valve on the discharge side of the pump (if your spa is installed with one.)
4. Turn the bleeder valve counter clockwise with a small pair of pliers until the air has been released from the pump.
5. If this is unsuccessful, loosen the union nut on side of the pump with channel locks. When air is bled out, tighten the nut.
6. Turn on power to the spa and press the JETS button. If there is still air trapped in the pump, repeat steps 2 through 5 until the pump primes.



TP400 Control Panel Operation

TP400 Control Panel

Primary Navigation and Functions

Navigating the entire menu structure is done with 2 or 3 buttons on the control panel.

You can use either Temperature button (Warm and Cool) to navigate and program where a single Temperature icon is shown.

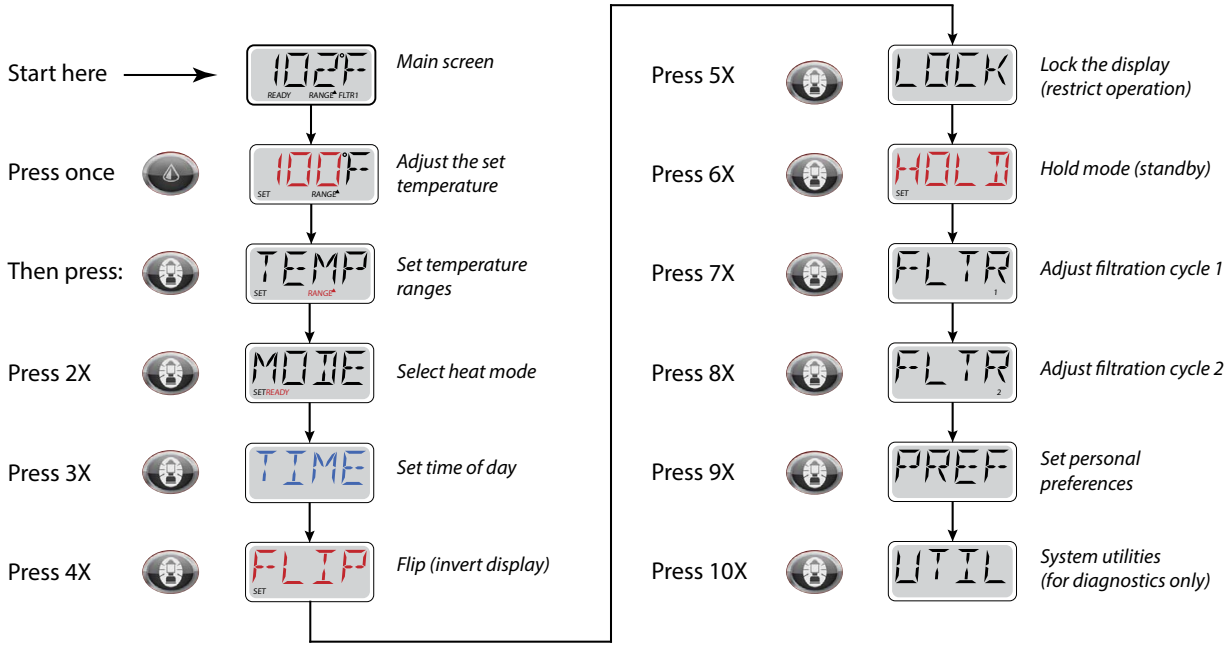
The Light Button is also used to choose the various menus and navigate each section.

Typical use of the Temperature buttons allows changing the Set Temperature while the numbers are flashing in the LCD.

Pressing the LIGHT button while the numbers are flashing will enter the menus.

The menus can be exited with certain button presses. Waiting several seconds in any screen will allow the display to revert to the main screen.

Most changes are not saved unless the Light button is pressed.

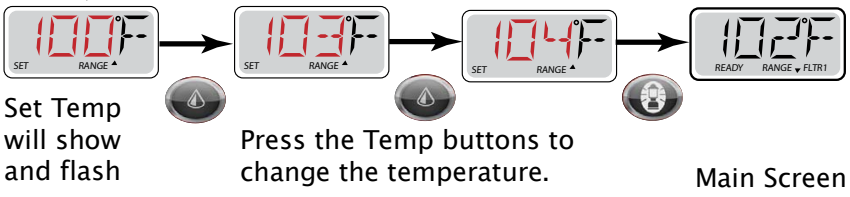


Adjusting the Set Temperature

Press Once

Press the WARM or COOL buttons to adjust the set temperature.

When the temperature stops flashing, the spa will heat to the new set temperature when required. The temperature can be set between 60°F and 104°F.



Set Temp will show and flash

Press the Temp buttons to change the temperature.

Main Screen

Setting Dual Temperature Ranges

Press Once

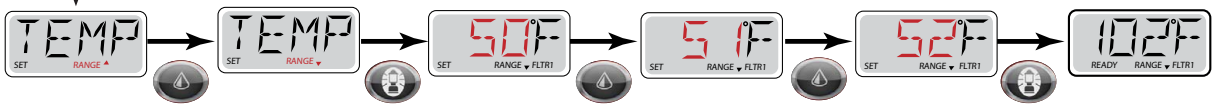
Then Press Once

You can set two temperature range settings with independent set temperatures. The High Range is shown in the display by an “up” arrow and the Low Range with a “down” arrow. The ranges can be used for different reasons, the most common being a “ready to use” setting versus a “vacation” setting. (See “Vacation Setting below.) Each range maintains its own set temperature that you program according to your needs. This way, when a range is chosen, the spa will heat to the set temperature programmed to that range.

High Range can be set between 80°F and 104°F.

Low Range can be set between 50°F and 99°F.

The example below shows setting the Low Range temperature.



Select High Range or Low Range. Toggle the Range arrows on the display.

Set Temp will show and flash

Press a Temp Button repeatedly to change the temperature.

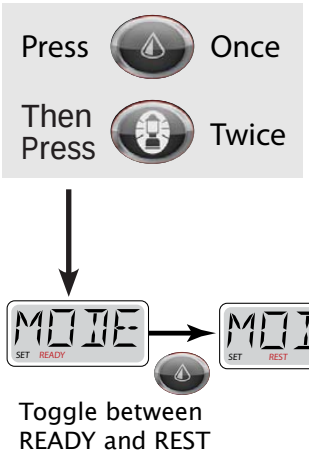
Main Screen

Vacation Setting

Set the spa to operate in the Lower Range temperature choice before you go on vacation.

1. Press the Temp button. The “Set Temp” will show and flash.
2. Press the Light button. “TEMP” will show on the display, which give you the choice of High Range or Low Range.
3. To set the Low Range, press the Light button, then press the Temp button. The “Set Temp” will show and flash.
4. Press the Temp buttons to adjust the temperature.
5. Press the Light button or wait several seconds to return to the main screen.

Setting the Heat Mode



Toggle between READY and REST

Main Screen

There are two heat modes: READY Mode and REST Mode.

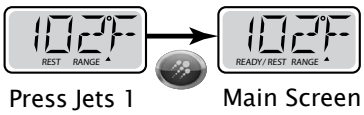
READY Mode: In order for the spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the "heater pump."

The heater pump can be either a 2-Speed Pump 1 or a circulation pump. If the heater pump is a 2-Speed Pump 1, READY Mode will circulate water every 1/2 hour, using Pump 1 Low, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as "polling."

REST Mode: REST Mode will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the heater pump has been running for a minute or two.

Ready-in-Rest Mode

READY/REST appears in the display if the spa is in Rest Mode and Jet 1 is pressed. When the spa is being used, it will heat to set temperature. While Pump 1 High can be turned on and off, Pump 1 Low will run until set temperature is reached, or 1 hour has passed. After 1 hour, the system will revert to Rest Mode. This mode can also be reset by entering the Mode Menu and changing the Mode.



Press Jets 1

Main Screen

Freeze Protection

If you live in an area that experiences extreme freezing weather, you need to know how to how to set your spa to prevent freeze damage. Some spa owners choose to drain and winterize their spas, but others prefer to keep it filled and operating. If you don't want to drain your spa, you can continue to run it safely through the winter, providing you program it correctly.

When you expect the temperture to approach freezing, always keep the spa in READY Mode. As long as the spa is in READY Mode, it will regularly check the water temperature (known as "polling") and circulate water every 1/2 hour.

When the sensors within the heater detect water temperature has dropped to 42°F (5.5°C), then the pumps and the blower automatically activate to provide freeze protection. The pumps and blower will run either continuously or periodically depending on conditions.

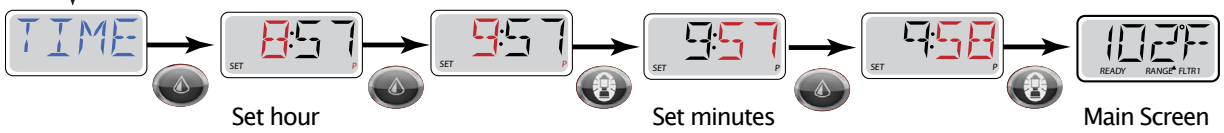
Setting Time

Press Once

Then Press 3X

Setting the time of day is important for determining filtration times and other background features. 24-hour time display can be set under the PREF menu.

Note: This system does NOT display the time of day. The default display on the Main Screen is the current water temperature. Displaying time of day is not a selectable feature.



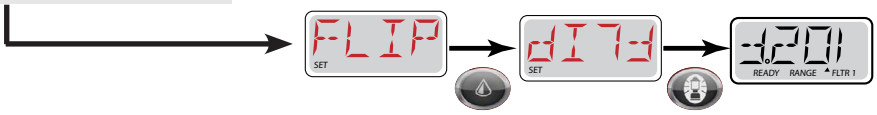
Set hour | Set minutes | Main Screen

Flip (Invert Display)

Press Once

Then Press 4X

Inverting the display allows you to be able to read the control panel while you are in the spa.



Press Temp button to flip the display

Main Screen

Locking the Control

Press Once

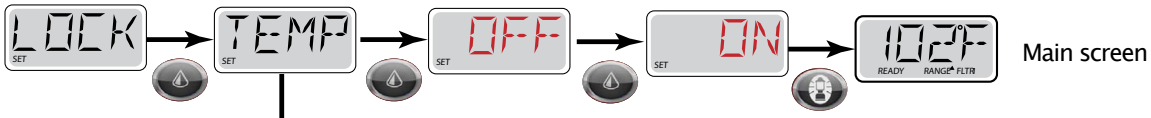
Then Press 5X

The control can be locked to prevent unwanted use or temperature adjustments. You can lock the set temperature or the control panel.

Locking the temperature allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

Locking the panel prevents the controller from being used, but all automatic functions are still active.

TO LOCK SET TEMPERATURE



You can toggle between ON and OFF using the Warm and Cool buttons

The set temperature has been locked

Press Light button to lock control panel

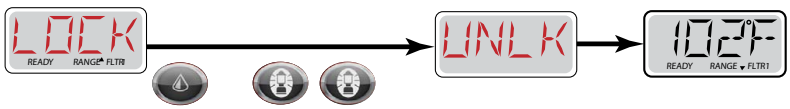
TO LOCK THE CONTROL PANEL

You can toggle between ON and OFF using the Warm and Cool buttons

The control panel has been locked

Unlocking the control

While pressing and holding the WARM Button, press the LIGHT button twice.



Press and hold

Press twice

Main screen

Hold Mode

Press Once

Then Press 6X

Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. (See page 28 for instruction on cleaning the filter.)

Hold Mode will last for 1 hour unless the mode is exited manually.

Timer will count down for 60 minutes

Main Screen

Adjusting Filtration

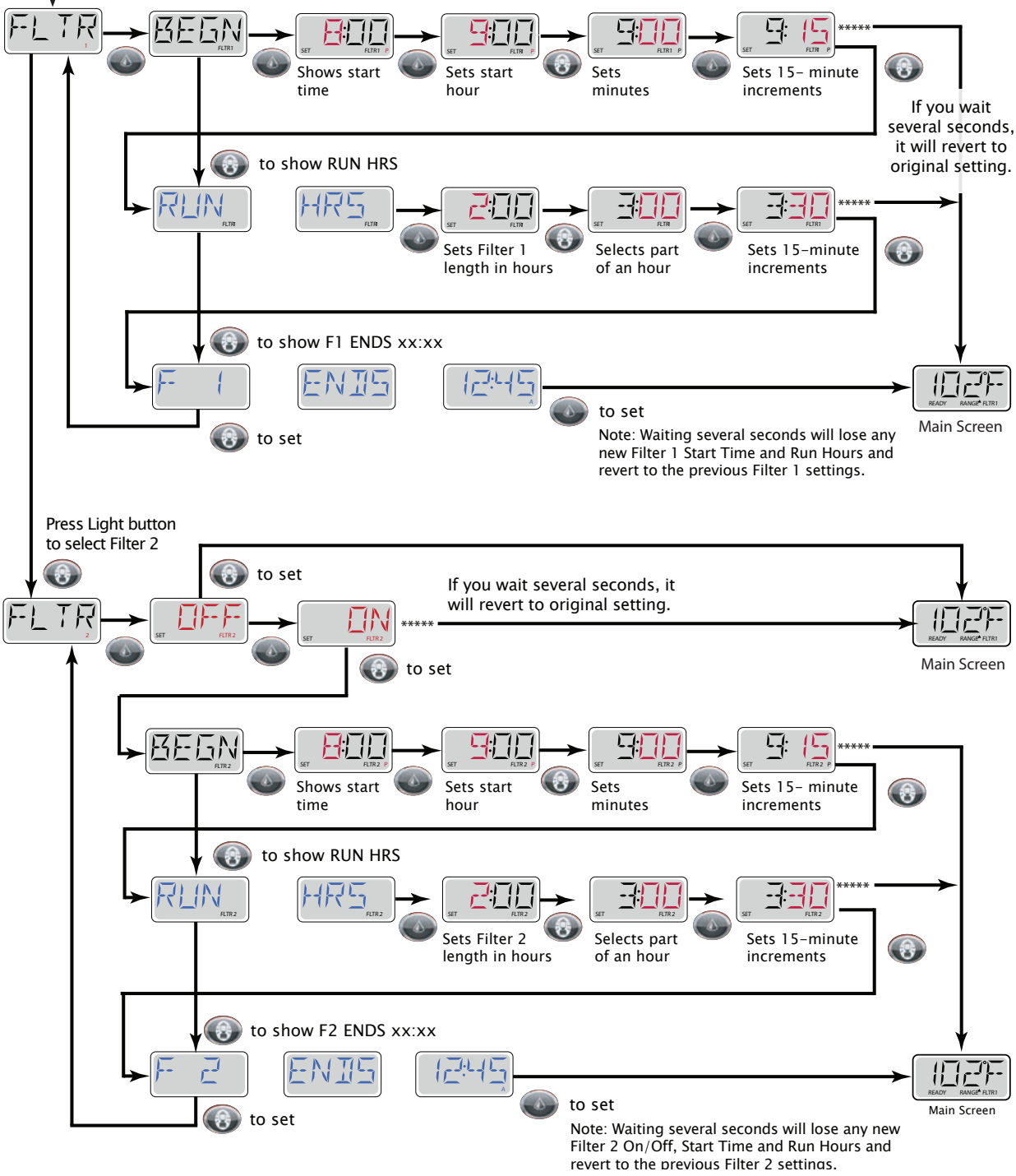
Press Once

Then Press 7X

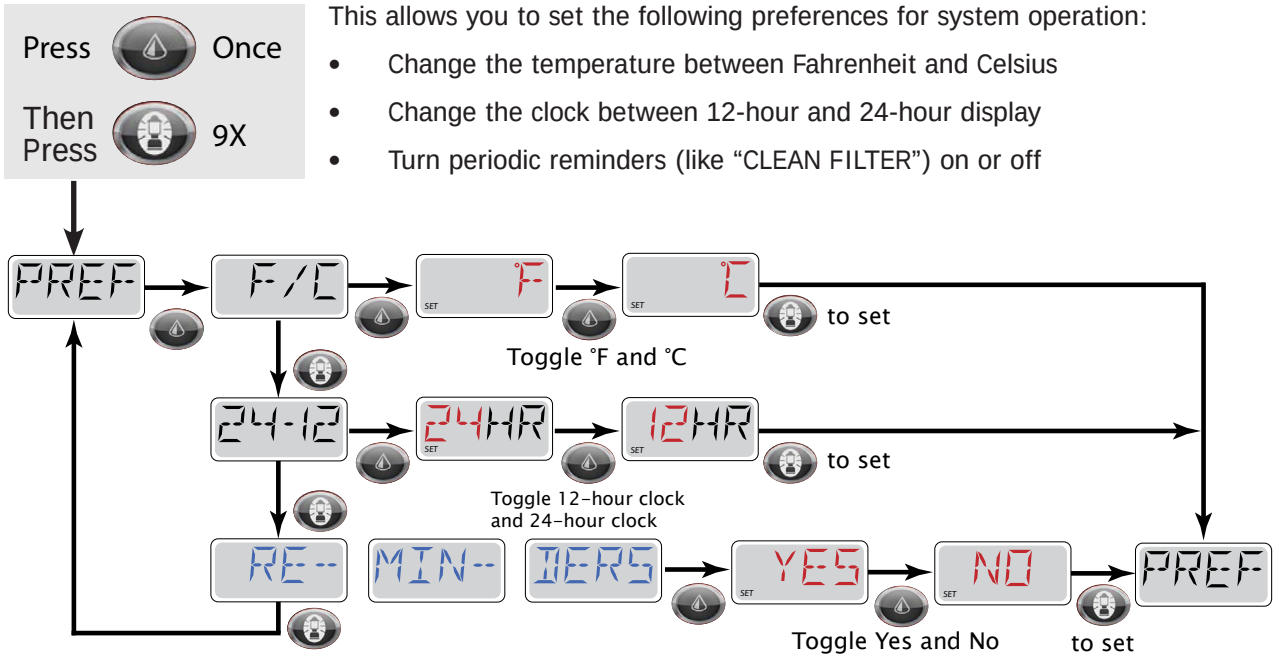
Main Filtration

Filter cycles are set using a duration. Each setting can be adjusted in 15-minute increments. Filter Cycle 1 and Filter Cycle 2 (if enabled) are set to the same duration.

If Filter Cycle 2 is enabled, Filter 2 will appear in the LCD. If Filter 2 is disabled, Filter 1 will appear.



Setting Preferences



This allows you to set the following preferences for system operation:

- Change the temperature between Fahrenheit and Celsius
- Change the clock between 12-hour and 24-hour display
- Turn periodic reminders (like “CLEAN FILTER”) on or off

Utilities

This menu feature is for system information only and is used mainly for repair and troubleshooting.

Other Spa Systems

Several spa functions operate in the background and require no action or maintenance from you. This is for your information only.

Pumps

Press the “Jets 1” button once to turn pump 1 on or off, and to shift between low- and high-speeds if equipped. If left running, the pump will turn off after a time-out period. The pump 1 low-speed will time out after 30 minutes. The high-speed will time out after 15 minutes.

On non-circ systems, the low-speed of pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode, Pump 1 low may also activate for at least 1 minute every 30 minutes to detect the spa temperature (polling) and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

Circulation Pump

The circulation pump will come on when the system is checking temperature (polling), during filter cycles, during freeze conditions, or when another pump is on.

The ozonator will run with the circulation pump during filtration cycles.

Purge Cycles

In order to maintain sanitary conditions, secondary Pumps and/or a Blower will purge water from their respective plumbing by running briefly at the beginning of each filter cycle.

Diagnostic Messages

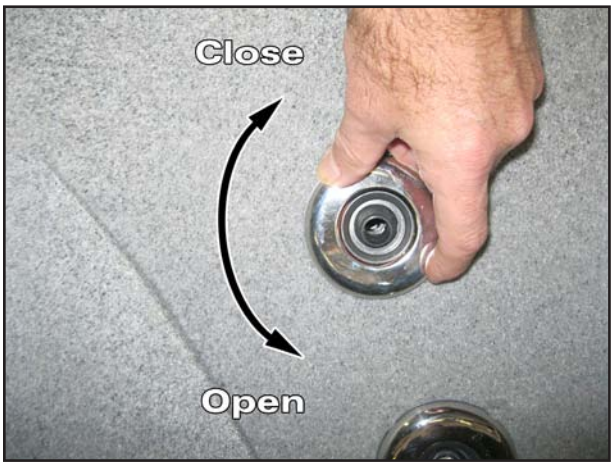
Message	Meaning	Action Required
RUN PMPS PURG AIR	**Priming Mode** Each time the spa is powered up, it will enter Priming Mode. The purpose of Priming Mode is to allow the user to run each pump and manually verify that the pumps are primed (air is purged) and water is flowing. This typically requires observing the output of each pump separately, and is generally not possible in normal operation.	Priming Mode lasts 4 minutes, but you can exit it earlier by pressing any Temp button. The heater is not allowed to run during Priming Mode. NOTE: If your spa has a Circ Pump, it will turn on with Jets 1 in Priming Mode. The Circ Pump will run by itself when Priming Mode is exited.
---F - ---C	**Water Temperature Is Unknown** After the pump has been running for 1 minute, the temperature will be displayed.	None
42F TOO COLD	**Too Cold - Freeze Protection** A potential freeze condition has been detected and all pumps and blower are activated. All pumps and blower are ON for at least 4 minutes after the potential freeze condition has ended. In some cases, pumps may turn on and off and the heater may operate during Freeze Protection.	None.
WATR TOO HOT	**Water is Too Hot** One of the water temp sensors has detected spa water temp 110°F (43.3°C) and spa functions are disabled.	None. System will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.
SFTY TRIP ----	**Safety Trip - Pump Suction Blockage** The Safety Trip error message indicates that the vacuum switch has closed. This occurs when there has been a suction problem or a possible entrapment situation avoided. (Note: not all spas have this feature.)	Drain or filter may be covered, creating a blockage. Clear the blockage and reset by pressing any button on the topside panel.
HTR FLOW LOSS ----	**Heater Flow Is Reduced** There may not be enough water flow through the heater to carry the heat away from the heating element.	Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. Heater start up will begin again after about 1 minute.
HTR FLOW FAIL ----	**Heater Flow is Reduced** There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled.	Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. Heater start up will begin again after about 1 minute.

Message	Meaning	Action Required
HTR MAY BE DRY ---- WAIT ----	**Heater May Be Dry** Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min.	Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. Press any button to reset the heater start-up.
HTR DRY ----	**Heater Is Dry** There is not enough water in the heater to start it. The spa is shut down.	Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. Press any button to reset the heater start-up.
HTR TOO HOT ----	**Heater Is Too Hot** One of the water temp sensors has detected 118°f (47.8°C) in the heater and the spa is shut down.	Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. Press any button to reset when water is below 108°f (42.2°C).
PRES BTTN TO RSET ----	**Spa Needs To Be Reset** This message may appear with other messages.	Press any button on the topside control to reset.
102F SNSR BAL- ANCE	**Sensor Balance Is Poor** The temperature sensors MAY be out of sync by 2°F or 3°F.	Call for service.
SNSR SYNC ---- CALL FOR SRVC ----	**Sensor Balance is Poor** The temperature sensors ARE out of sync.	Call for service. Note: This message can be reset from the topside panel with any button press.
SNSR A ---- CALL FOR SRVC **SNSR B ---- CALLFOR SRVC**	**Sensor Failure** A temperature sensor or sensor circuit has failed.	Call for service.
NO COMM	**No Communications** The control panel is not receiving communication from the system.	Call for service.
102°T	**°F or °C is replaced by °T** The control system is in Test Mode.	Call for service.
STUK PUMP ----	**A Pump Appears To Be Stuck ON** Water may be overheated.	POWER DOWN THE SPA. DO NOT ENTER THE WATER. Call for service.
HOT FALT ---- CALL FOR SRVC ----	**A Pump Appears To Be Stuck ON** A pump appears to have been stuck ON when spa was last powered.	POWER DOWN THE SPA. DO NOT ENTER THE WATER. Call for service.

Adjusting Jets

The larger massage jets in your spa are adjustable. Rotating the face of an adjustable jet to the left (counter-clockwise) will decrease the amount of water flow through the jet. Rotating the face of an adjustable jet to the right (clockwise) will increase the amount of water flow through the jet. (See example shown below.)

The neck jets are smaller in size and are not adjustable.



Clear Water Plan

This section is intended for new spa owners with no experience with water chemistry. Everyone's experience with maintaining water quality is different, but there are some general concepts you need to know.

Water maintenance is not difficult, although it requires regular attention. The most important thing to understand about taking care of your spa water is that preventive action is much easier than correcting water quality issues.

Contents of this section:

Testing and Adjusting Spa Water
Sanitation
Filtration
Bather Load
Starting the Spa with Fresh Water
Maintenance Schedule
Troubleshooting Water Clarity Problems

The Key to Clear Water

Excellent water quality is a simple matter of four things:

Regularity

Clear water requires regular maintenance. Establish a routine based on a regular schedule for your spa water maintenance.

Maintaining your water quality helps the enjoyment of your spa and extends your spa's life by preventing damage from neglect and chemical abuse.

See page 34 for the schedule of recommended maintenance.

Filtration

Cleaning your filter regularly is the easiest and most effective single thing you can do to keep your water clear.

A clogged or dirty filter will cause the heater and pump to work harder than they need to, possibly causing them to fail.

The spa's heating system will only function with the proper amount of water flow through the system.

See page 28 for filter cleaning instructions.

Sanitation

Sanitizers kill bacteria and viruses and keep the water clean. A low sanitizer level will allow microbes to grow quickly in the spa water.

We recommend using either chlorine or bromine as your sanitizer.

Spa owners with an ozonator also need to add sanitizer, although their requirements are different.

See page 27 for learn how to use sanitizer.

Chemical Balance

You will need to test and adjust the chemical balance of your spa water. Although this is not difficult, it needs to be done regularly.

Depending on your choice of sanitizer, you need to test the level of calcium hardness, total alkalinity, and pH. Spa owners with a Cal Clarity bromine generator also need to check total dissolved solids and phosphates.

See page 26 for learn how to balance your spa water.

Testing and Adjusting Spa Water

You have two types of testing methods to choose from:

- **The reagent test kit** is a method which provides a high level of accuracy. It is available in either liquid or tablet form.
- **Test strips** are a convenient testing method commonly used by spa owners.

Balancing the Total Alkalinity

Total alkalinity (TA) is the measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA can be considered a “pH buffer”. It is the measure of the ability of the water to resist changes in pH level.

The recommended total alkalinity is 80 - 120 ppm.

If the TA is too low, the pH level will fluctuate widely from high to low. Low TA can be corrected by adding an alkalinity increaser

If the TA is too high, the pH level will tend to be too high and may be difficult to bring down. High TA can be corrected by adding an alkalinity decreaser.

When the TA is balanced, it normally remains stable, although adding water with high or low alkalinity will raise or lower the TA level.

Balancing the Calcium Hardness

Calcium hardness (CH) is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa’s water and is why soft water is not recommended. The low calcium content of soft water is very corrosive to the equipment and can cause staining of the spa shell.

The recommended calcium hardness is 150 - 200 ppm.

If the CH is too low, add a calcium hardness increaser.

If the CH is too high, dilute the spa water with soft water.

When the CH is balanced, it normally remains stable, although adding soft water or very hard water will raise or lower the CH level.

Balancing the pH

The pH level is the measure of the balance between acidity and alkalinity.

If the pH is too low, it can cause corrosion of metal fixtures and the heating element. Low pH can be corrected by adding a pH increaser.

If the pH is too high, it can cause scaling by allowing metals or minerals to form deposits and stain spa surfaces. High pH can be corrected by adding a pH decreaser.

Ideal Water Chemistry

Testing For:	Ideal Range (ppm)	
	Minimum	Maximum
Total Alkalinity	80	120
Calcium Hardness	150	200
pH	7.4	7.6

Sanitation

Sanitizers kill bacteria and other organic waste by breaking them down to non-harmful levels and are filtered out. Before you fill your spa, you need to decide which chemical sanitizer you wish to use. Consult your spa dealer for the right decision with regards to your lifestyle and spa usage.

We recommend either **bromine** or **chlorine** as your sanitizer. Both work well when maintained regularly.

DO NOT use trichlor. Trichlor is very acidic and the hot temperature of the spa causes it to dissolve too quickly. It will cause damage to your spa and will void your warranty.

Whichever plan you decide on, follow it completely and don't take shortcuts. It will provide you with clean, safe, clear spa water with a minimum of effort. Spa owners with an ozonator still need to use a chemical sanitizer. See page 28 for instructions.

Using Chlorine as a Sanitizer

If you choose to use chlorine as a sanitizer, only use granulated chlorine, not liquid chlorine.

Once a week, check the chlorine level using either a test strip or a reagent kit. See the table on the following page for the ideal range.

Add one or two tablespoons granulated chlorine to the spa water weekly. Note that chlorine dissipation rate will be faster at higher water temperatures and slower at lower temperatures.

When you add chlorine, open all of the jets and run the spa at high speed with the cover open for at least 30 minutes.

Follow the maintenance schedule on page page 34.

Using Bromine as a Sanitizer

Bromine is a very effective sanitizer that produces low chemical odors. Unlike chlorine, it can break down bacteria and other impurities to a safe level with a low burn-out rate.

Bromine is available in both granulated and tablet form. Use granulated sodium bromide to establish your bromine base. Use tablets to maintain it.

When you begin with fresh water, add 2 ounces of granulated bromide. Open all of the jets and run the spa at high speed with the cover open for at least 30 minutes. This is your base bromine level as the tablets will take a while to dissolve.

Place three or four bromine tablets in your chemical floater.

Follow the maintenance schedule on page page 34.

Shocking the Water

In addition to using a chemical sanitizer, you will periodically need to shock the water. Shocking the water helps remove burned-out chemicals, bacteria, and other organic material from your spa's water and improves your sanitizer's effectiveness.

Do not use chlorinating shock, which will damage your spa's jets and pump seals. Only use an oxidizer shock. It can be used with either chlorine or bromine sanitizers.

Add one ounce of oxidizer shock once a week, after heavy bather loads, or if water has a strong odor.

Spa must be running with all of the jets on high for 30 minutes with the cover open. If necessary, repeat oxidizer shock in 30 minute intervals.

Testing For:	Ideal Range (ppm)	
	Minimum	Maximum
Chlorine level		
Without ozonator	3.0	5.0
With ozonator	2.0	4.0
Bromine level		
Without ozonator	6.7	11.0
With ozonator	5.7	10.0

Bather Load

"Bather Load" is the term used to describe the number of people using a spa, combined with the length of usage, and the frequency of usage. All these factors have a great effect on the spa water. The higher the bather load, the more chemicals need to be added and a longer filtration time will be needed.

Recommendations are designed for spas with average bather load (3 to 4 people, 15 minutes of usage, three times a week at 100 degrees) If your bather load exceeds these guidelines, and you experience water quality problems, increase the amount of filtration first, (go to the next higher filtration number) then if water quality is still not adequate, consult the advice of your spa dealer for additional chemical or system recommendations. Be sure to give them your bather load information.

Filter Cleaning

The filter is the part of your spa that removes the debris from the water and needs to be cleaned on a regular basis to maximize your spa's filtering performance and heating efficiency.

In addition to spraying off the filter weekly to remove surface debris, your filter should be deep cleaned periodically to dissolve scale and particles that get lodged deep within the filter fibers and impede the filtration process. Even if the filter looks clean, scale and particles can clog the fibers and prevent water from flowing through the filter resulting in the most common spa problem—no heat, caused by a dirty filter.

We recommend you clean your filter once a month and replace it once a year or as necessary.

It is extremely important that you never run the spa without a filter. There is a possibility that debris may be sucked into the plumbing through the filter well.

Set the spa in Hold Mode before you remove the filter. Hold Mode pauses all spa operations for 60 minutes for service functions like cleaning or replacing the filter. See page 19 for instructions on using Hold Mode.

Cleaning the filter

1. Remove the filter by unscrewing it and pulling it up and out.
2. Place the dirty filter into a bucket of water deep enough to cover the filter. Add 8 oz of liquid filter cleaner to the bucket of water.

   Note: It is a good idea to keep a spare filter to use in the spa while the dirty filter is being deep cleaned. This way, you can rotate the filters and both will last longer.
3. Soak the filter for a minimum of 24 hours.
4. Spray the filter with a water hose. Spray each pleat carefully.
5. Reinstall the filter. Do not overtighten.

Ozonator

The ozone generator releases ozone into the spa water. You will still need to test for chlorine or bromine and occasionally replenish it to return the sanitizer level to the baseline.

For spas without a circulation pump, pump 1 will run at low speed and the ozonator will run during filtration.

For spas with a circulation pump, the ozonator will run with the circulation pump.

The spa's control system is factory-programmed with one filter cycle that will run in the evening when energy rates are often lower. The time and duration of the filter cycle can be set according to your needs. In addition, a second filter cycle can be enabled. Filtration time may need to be increased with heavy bather load.

See instructions for setting filtration cycles on page 20.

Troubleshooting Water Clarity Problems

Problem	Probable Causes	Possible Solutions
Cloudy Water	• Dirty filter • Excessive oils / organic matter • Improper sanitization • Suspended particles / organic matter • Overused or old water	• Clean filter • Shock spa with sanitizer • Add sanitizer • Adjust pH and/or alkalinity to recommended range • Run jet pump and clean filter • Drain and refill the spa
Water Odor	• Excessive organics in water • Improper sanitization • Low pH	• Shock spa with sanitizer • Add sanitizer • Adjust pH to recommended range
Chlorine Odor	• Chloramine level too high • Low pH	• Shock spa with sanitizer • Adjust pH to recommended range
Musty Odor	• Bacteria or algae growth	• Shock spa with sanitizer – if problem is visible or persistent, drain, clean and refill the spa
Organic buildup / scum ring around spa	• Buildup of oils and dirt	• Wipe off scum with clean rag – if severe, drain the spa, use a spa surface and tile cleaner to remove the scum and refill the spa
Algae Growth	• High pH • Low sanitizer level	• Shock spa with sanitizer and adjust pH • Shock spa with sanitizer and maintain sanitizer level
Eye Irritation	• Low pH • Low sanitizer level	• Adjust pH • Shock spa with sanitizer and maintain sanitizer level
Skin Irritation / Rash	• Unsanitary water • Free chlorine level above 5 ppm	• Shock spa with sanitizer and maintain sanitizer level • Allow free chlorine level to drop below 5 ppm before spa use
Stains	• Total alkalinity and/or pH too low • High iron or copper in source water	• Adjust total alkalinity and/or pH • Use a stain and scale inhibitor
Scale	• High calcium content in water – total alkalinity and pH too high	• Adjust total alkalinity and pH – if scale requires removal, drain the spa, scrub off the scale, refill the spa and balance the water • Use a stain and scale inhibitor

Cleaning and Maintenance

Removing the Access Panel

You will need to remove the access panel in order to drain your spa.

1. Unplug the spa.
2. Using a Phillips screwdriver, remove the screws located in the four corners of the access panel.
3. Remove the access panel and set it aside.

Replace the access panel when you are finished. Do not overtighten the screws.

Do not run the spa with the access panel removed!

Draining Your Portable Spa

Your spa should be drained every four to six months for cleaning and maintenance and refilled with fresh tap water. See page 33 for instructions on cleaning the shell, cover, and pillows. See page 11 for instructions on refilling your spa. Before you begin, turn off power to the spa at the breaker and remove all filters.

1. Locate your drain.

Using a Phillips screwdriver, remove the screws to the access panel and open it. Locate hose ending with the ¾ inch hose-bib fixture as shown below.

2. Remove the cap

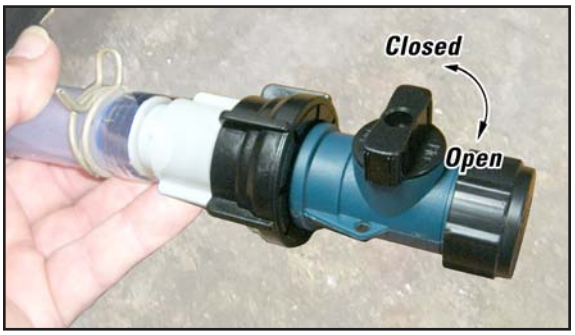
Make sure the valve is in the closed position, then unscrew and remove the cap. Unscrew the cap.

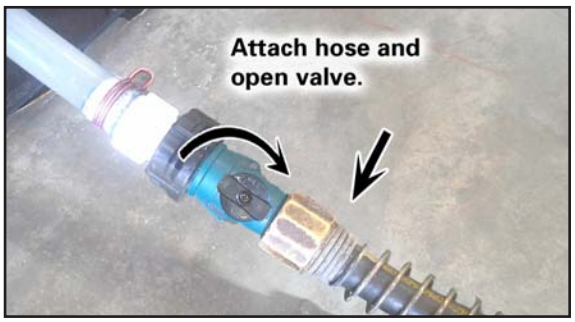
3. Connect valve to a garden hose.

Attach a garden hose to the hose-bib fixture. Place the other end of the garden hose where you would like the water to drain.

4. Drain the spa.

Turn the valve on the hose-bib fixture to open the drain. When the spa has drained completely, turn the valve on the hose-bib fixture, remove the garden hose, and replace the cap.





Winterizing (Cold Climate Draining)

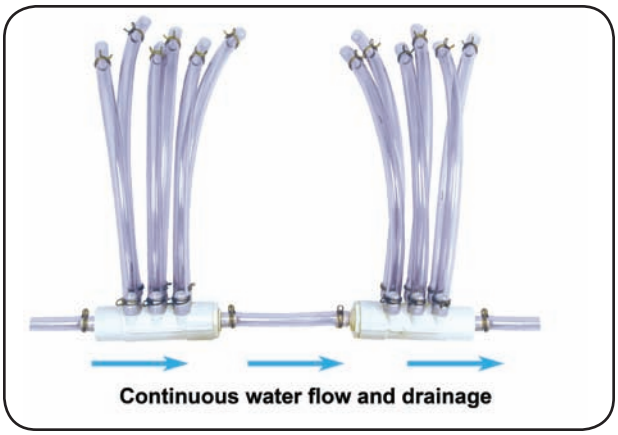
In many areas of the country, the temperature drops below 32˚F (0°C). We recommend that you always have your spa full of water and running at normal spa temperatures (80˚F to 100˚F, 26.7°C to 37.8°C). This will help reduce the risk of freezing in your spa and your spa's equipment.

Warning: If you find the need to drain your spa, be aware of the potential of freezing in your spas equipment and plumbing. Even if the directions below are followed perfectly, there is no guarantee that your spa will not suffer freeze damage. Freeze damage is not covered by your warranty.

All manifolds are plumbed in series directly to the main drain (see figure at right), making it easier to remove water and reducing the possibility of freeze damage.

1. Open all filter covers.
2. Remove the filter baskets and filters.
3. Drain your spa completely as described in the instructions above.
4. Vacuum water from the spa's main drain fitting with a wet/dry vacuum.
5. Open the bleeder valves on the pumps.
6. For spas with the UV lamp chamber mounted flat on the equipment floor:

   Loosen the quartz tube nut at the top of the UV lamp chamber and pull up the quartz tube to let the water drain from the UV lamp chamber.
7. Disconnect the unions from both sides of the pump.
8. Blow any remaining water out of the jets and equipment area with the wet/dry vacuum.



9. When it has completely finished draining, replace the quartz tube in the UV lamp chamber and retighten the nut. Close the bleeder valves and reconnect the unions on the pumps. Replace the filter baskets and filters.
10. Cover your spa with a good spa cover and an all-weather tarp to ensure that neither rain nor snow enters the spa.

Jet Removal and Replacement

Jets can be easily removed for cleaning.

Grasp the outer rim of the jet and turn it counter-clockwise until it completely stops. You may feel it slightly loosen pop out a bit from the fixture. Pull the jet out from the jet fixture. The jet will be very snug and may require some force to remove it. DO NOT PRY OUT JETS.

To replace the jet, place it in the fitting and turn it clockwise until it snaps in and can be rotated freely about half a turn.

Cleaning and Replacing the Filter

Filtration is one of the most important steps you can take to ensure clean, clear water. It is far less expensive to fix water clarity problems by filtering your spa than by using excessive amounts of chemicals, excessive filtration times, or by water replacement.

See the section “Filter Cleaning” on page 28 for more information.

Installing Cover Latches

You will need a drill with a 3/32” drill bit and a Phillips screwdriver.

Your cover will have four clips attached to the ends of the four latches, two on each end of the spa cover. There will also be a small bag with eight screws.

1. Place the cover on the spa with the lock pieces attached to the latches. Use the strap length as a measure for where you will place and attach the lock pieces.

2. Remove the latches, keeping the lock piece in place. Drill two holes for the mounting screws.

3. Insert two screws in the latch clip and fasten it to the spa shell. Make sure they are snug, but do not overtighten them. Do the same for the remaining latches. Drill and attach latch clips to the shell one at a time.

Use the included latch key to lock your cover when the spa is not in use.

Covering Your Spa

Important! Keep the spa covered when not in use!

- Covered spas will use less electricity in maintaining your set temperature.
- Covering your spa will protect your spa's finish from the sun's ultraviolet rays.
- You are required to keep the spa covered to maintain warranty coverage.
- Covering your spa helps prevent children from drowning in the spa.

See the manual enclosed with your cover for instructions on mounting the locks and how to lock and unlock the cover.

In addition, while the spa cover is rigid, it is not designed to support any weight. Therefore, as a safety precaution and to preserve the life of your cover, you must not sit, stand, or lie on it, nor should you place objects of any kind on top of it.

Cleaning and Replacing the Filter

Filtration is one of the most important steps you can take to ensure clean, clear water. It is far less expensive to fix water clarity problems by filtering your spa than by using excessive amounts of chemicals, excessive filtration times, or by water replacement.

In addition, you need to regularly clean out the filter basket mounted on top of the filter well.

See the section "Filter Cleaning" on page 28 for more information on cleaning your filter.

Cleaning Your Spa

Spa Cover

Due to the constant punishment your spa cover receives, you should protect it by applying a vinyl and leather cleaner as part of your monthly maintenance plan.

Use a product that is specifically designed to protect spa covers from chemical and ultraviolet light damage without leaving an oily residue behind that is normally associated with common automotive vinyl protectants.

Spa Shell

Chemical build-up on the interior of roto mold spas is normal, and it is much more noticeable with the two darker toned spas ("Cinnabar" and "Dark Twilight") than with the lighter toned spa ("Sahara").

Chlorine and bromine residue dry as a white powder on the spa shell. You can easily clean this by using a low detergent, non-abrasive cleaner, such as Simple Green®, without damaging its finish.

Each time you drain your spa, before you refill it you should apply a coat of non-oil based surface protectant that is specifically formulated to protect the spa's finish from the chemicals and minerals associated with normal spa use.

Maintenance Schedule

Each time you refill the spa	Follow the section “Filling and Powering Up Your Portable Spa” on page 11.
Prior to each use	Test the spa water using either test strips a reagent test kit. Adjust chemical levels as necessary.
Once a week	Test the spa water using either test strips a reagent test kit. Adjust chemical levels as necessary. If your water source is high in calcium, add stain and scale preventer.
Once a month	Deep clean your spa’s filter. (Follow filter cleaning instruction at beginning of this section)
Every two to four months	Drain and clean your spa with a multi-purpose cleaner for spas. Clean and treat spa cover, pillows, and cabinet (if equipped) with a vinyl cleaner for spas. Refill your spa, following the section “Filling and Powering Up Your Portable Spa” on page 11.
Every four to six months	Change the spa water. You may find the need to change your spa water more frequently with heavy use. When empty, your spa should be cleaned with a non-abrasive cleaner and then rinsed thoroughly.
Once a year	Replace filter cartridges if the pleats appear frayed. If you use an ozonator, you will need to replace the ozone cartridge.

Replacement Parts

Jet Inserts and Jet Bodies		
Jet Inserts	**Jet Bodies**	**Gaskets**
SQ2, 2” directional jet **Stainless steel w/ black eyeball** PLU29523-012-200 	**2” Jet body Pro Lock SQR, ¾” smooth bard water x 3/8” smooth bard air (#29222-229-000)** PLU29222-299-000 	**2” jet grommet gasket (#29222-299-040)** PLU29222-299-040
SQ3, 3” directional jet **Stainless steel w/ black eyeball** PLU29533-112-200 	**3” Jet body Pro Lock SQR, ¾” smooth bard water x 3/8” smooth bard air (#29232-229-000)** PLU29232-299-000 	**3” jet grommet gasket (#29232-299-040)** PLU29232-299-040

Waterfall	
SQL, SQR dual hydrostream (#25269-404-000) - includes jet insert, jet body, gasket and nut PLU25269-404-000	

Drain

Main Drain, Super Hi Flo Suction 2” Charcoal

PLU21400137

Water Diverter Valve

PLU21300452 one inch diverter valve Star Fire

PLU21300452

Filter

Filter Cartridge, 25 Sq Ft

FIL11100303

Filter Cartridge Mounting Assembly

Filter cartridge mounting assembly, 2” NPT (#400-9130) FIL11703210	
O-ring for filter mounting PLU21700462	

Ozone Injector

Ozone injector / cluster

PLU21700828

Lights

2-LED light string (Ros-tech) LIT16100620	
4-LED light string LIT16100621	
Interior light with logic LIT16100625	
LED light string jumper, 46 inches, daisy chain ELE09902531	

Two Speed Pumps

115V 1.5 BHP XP2 PUM22000551	
230V 5.0 BHP XP2e PUM22000553	

Control Panel

Control panel, Coleman® TPC400U, 1 pump system (#50451) (‘15) ELE09002097	
Control panel, Coleman® TPC400T, 2 pump system (#50471) (‘15) ELE09002096	

Control Box

BP501G1 800INC (#56485), 120V

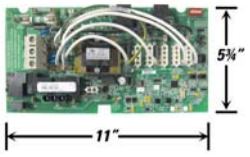
2-pump system

ELE56485

Circuit Board

Circuit board for control box BP501G1 CSBP501G1 (#56488-01)

ELE09907297



Heater

5.5 kW flow-through heater with Smart Spa sensor

HEA14100450

Ozonator

Ozone generator

OZO18000250

Power Cord and Plug

GFCI Plug and Cord, 15’

ELE09700086

GFCI Plug

ELE09700070

Spa Covers

All covers are basic spa covers with 4” - 2.5” taper and no logo

Size	Slate	Hunter Green
76” Round	COV76RDB42S-WN	COV76RDB42GR-SSO
73” x 83”	COV7383B42S-WN	COV7383B42GR-SSO

Spa Cover Lock and Key

Spa cover lock and key set (set includes 4 females, 4 males, key & screws package)

ACC01800026

Filter Covers				
Filter cover		Cinnabar ROT12000300CI	Dark twilight ROT12000300DA	Sahara ROT12000300SA

6 Foot Spa Panel	
Rock panel, 22 ¾" x 22 ¼"	**Smoke** ROT12000201SM

7 Foot Spa Panel	
Rock panel, 27" x 22"	**Smoke** ROT12000200SM

Round Spa Panels				
Roto mold round door panel		**Cinnabar** ROT12000205CI	**Dark Twilight** ROT12000205DA	**Sahara** ROT12000100SA

Troubleshooting

Symptom	Possible Causes	Possible Solutions
System / Power Problems		
System does not work	Power is turned off	Reset spa
Control pad and spa equipment do not operate	No electrical power to spa	Turn on or reset the GFCI circuit breaker. If this does not solve the problem, have a qualified electrician check the electrical service.
	The 20 or 30A fuse, depending on the system, has blown	Contact your dealer
The spa does not turn off	Spa is trying to heat up	Check the temperature setting is in Standard mode
	Spa is in filter cycle	Normal. No adjustment necessary
	Spa is in Standard mode	Check setting
Control panel displays a message	An error may have has occurred	See Diagnostic Messages on page 22 for message code meanings
GFCI breaker trips repeatedly	Improper wiring to spa or GFCI breaker is defective	Consult with a qualified electrician
	There is a defective component on the spa	Contact your dealer
Heat Problems		
Spa does not heat	Heating mode not selected	See control panel instructions on pages page 15
	Water level is too low	Add water to correct level
	No electrical power to spa	Turn on or reset the GFCI circuit breaker. If this does not solve the problem, have a qualified electrician check the electrical service.
	Heater is defective	Contact your dealer
	Gate valve is partially or fully closed	Open gate valves. Note: Never operate your spa with the gate valves closed!
Spa gets warm but does not get hot	Thermostat has been turned down	Set control panel to a higher temperature
	Insufficient filtration time	Increase filtration time
	Water level is too low	Add water to correct level
	No electrical power to spa	Turn on or reset the GFCI circuit breaker. If this does not solve the problem, have a qualified electrician check the electrical service.
	Dirty filter cartridge	Clean filter cartridge
	Gate valves closed	Open gate valves
	Spa cover improperly positioned	Align spa cover

Symptom	Possible Causes	Possible Solutions
Spa gets too hot	Filtration time is set too long	Reduce filtration cycles, especially during summer months
Water Problems		
Water is not clean	For all water clarity problems, see page 29.	
High water consumption	Very high evaporation or heavy splashing	Use the cover and refill as necessary
Low water stream from the jets	Running in FILTER mode - slow speed	Select high speed jets
	Block wall suctions or skimmer	Clean the wall suction/skimmer. Remove blockage
	Dirty filter	Clean filter and replace
	Jets are closed	Open jets
	Valves closed	Open valves
No water stream from the jets	Pump has airlock	Remove airlock by priming spa (page 13)
	Jets are closed	Open jets
	Power switched off, system off	Reset power
	Pump is defective	Contact your dealer
	Pump fluctuations	Low water. Check level on skimmer flap
Water leakage from below the spa	Check the connections and empty the hoses	Close or turn off empty cycle if necessary
Water Pressure Problems		
Jets surge on and off	Water level is too low	Add water to normal level
Jets are weaker than normal or do not work at all	Jet valves are partially or fully closed	Open jet valves
	Filter cartridge is dirty	See Cleaning the Filter
	Air is trapped in the pump	Open the air bleed valve on each pump's housing and allow air to bleed out of the system. Be sure to tighten each air bleed valve as soon as water starts to flow.
	The suction fittings are blocked	Remove any debris that may be blocking the suction fittings
	Gate valve is closed	Open gate valves. Note: Never operate your spa with the gate valves closed!
Air and Jets Problems		

Symptom	Possible Causes	Possible Solutions
No airstream from the jets	Air control not open	Open the control
	Jet spout opening not fixed properly	Check jet spout openings
	Jet spout opening missing	Check jets and replace as necessary
Light Problems		
Standard spa light does not work	Light bulb has burned out	Replace light bulb
	Lighting system is defective	Contact your dealer
Pump Problems		
Pump runs constantly – will not shut off	Problem with circuit board	Contact your dealer
Noisy pump	Water level is too low	Add water to normal level
	Block wall suctions or skimmer	Clean the wall suction/skimmer
	Damaged or worn-out motor block	Contact your dealer
	Clogged floor suction or skimmer	Clean floor suction or skimmer
	Leakage of air into suction line	Contact your dealer
	Debris is inside pump	Contact your dealer
	Gate valves are closed	Open gate valves. Note: Never operate your spa with the gate valves closed!
	Damaged or worn motor bearings	Contact your dealer
	Improper or defective wiring	Contact your dealer
Pump turns off during operation	Automatic timer has completed its cycle	Start the cycle again
	Pump has overheated due to the vents on the equipment door being blocked	Clear items away from vents
	The pump motor is defective	Contact your dealer
Pump has a burning smell while running	Damaged or worn motor bearings	Contact your dealer
Pump does not work	Power may be turned off	Reset power
	Pump has over heated	Let cool for one hour
	Incorrect or faulty wiring of electrical supply	Contact your dealer
	Switch is off	Auto reset after the motor has cooled down
	House circuit breaker tripped or in OFF position	Reset circuit breaker Contact your dealer
	Motor overload condition	Motor overload will reset automatically. If problem persists, contact your dealer
	Damaged electrical cord	Contact your dealer
	Pump cord not plugged in	Plug pump cord into red receptacle
	GFCI tripped or in OFF position	Reset GFCI

LIMITED WARRANTY

This Limited Warranty is extended to the original purchaser of Coleman® roto mold portable spas manufactured after January 1, 2013 and installed for residential use in the United States of America and Canada.

Lifetime Guarantee Shell Structural

Coleman® roto mold spas have a lifetime guarantee against water loss due to defects in the spa shell from the original date of delivery.

1 Year Equipment and Controls

Coleman® roto mold spa electrical equipment components – specifically limited to the pumps and control system – are warranted against malfunctions due to defects in workmanship or materials for one year from the original date of delivery.

1 Year Plumbing

Coleman® roto mold spas are warranted against leaks due to defects in workmanship or materials for one year from the original date of delivery.

Lifetime Guarantee Cabinet

Coleman® roto mold spa cabinets have a lifetime guarantee against defects in workmanship or materials from the original date of delivery. Normal wear and weathering of the finish will occur naturally over time and are not defects.

Warranties for Other Components

The fuses, shell, cabinet finish, and filters are warranted to be free of defects in workmanship and material at the time of delivery. The factory installed Pure Cure water purification system is warranted against malfunction due to defects in workmanship or material for one year from the original date of delivery except the UV bulb and quartz tube, which are warranted for 90 days from the original date of the spa delivery. All other factory-installed components not mentioned specifically, including, but not limited to the jets, diverter valves, LED lighting systems, filter lids, and mechanical components, are warranted against malfunction due to defects in workmanship and material for one year from the original date of delivery. The spa cover delivered with the spa is warranted for 90 days.

Genuine Coleman® Spas Parts & Accessories

This Limited Warranty is void if Coleman® Spas (the "Manufacturer") or its designated representative (LMS Customer Service) determines that the spa has been subjected to damage or failure due to installation of aftermarket parts that are not genuine Coleman® Spa branded parts and accessories. This disclaimer includes, but is not limited to filters, UV bulbs, ozone systems, salt systems, repair parts and other accessories. Our parts and accessories are built to our highest standards of quality, durability and performance, and they are designed to work with your spa to ensure optimal performance and function.

Performance

This warranty begins on the date of delivery of the spa, but in no event later than one year from the date of manufacture. To obtain service in the event of a defect covered by this Limited Warranty, notify your spa dealer or LMS customer service as soon as possible and use all reasonable means to protect the spa from further damage. Upon proof of purchase, a designated service representative will correct the defect subject to the terms and conditions contained in this Limited Warranty. There will be no charge for parts or labor to repair the defect, although providing access to the affected area of the repair is your responsibility as the spa owner. Freight charges for replacement parts is the responsibility of the spa owner. You may be assessed reasonable repairman travel mileage charges. In the event that the spa is removed to a repair facility

for repair and reinstalled, the cost of removal and reinstallation will be your responsibility as the spa owner. If the Manufacturer determines that repair of the covered defect is not feasible, it reserves the right to provide a replacement spa instead, equal in value to the purchase price of the original spa. In such an event, reasonable costs for removal of the original spa, shipping costs from the factory for the replacement spa and delivery and installation of the replacement will be your responsibility as the spa owner. The replacement spa will carry the balance of the original spa's warranty. Spa covers are not included. This warranty ends either by specified time frame, owner-transfer, relocation, or installation of any component other than by manufacturer.

Warranty Limitations

This Limited Warranty is void if Coleman® Spas or its designated representative (LMS Customer Service) determines that the spa has been subjected to alteration, neglect, misuse or abuse, or freight damage caused by the common carrier; any repairs have been attempted by anyone other than a designated representative; or if the failure is caused by accident, acts of God or other causes beyond the control of the Manufacturer. Neglect, misuse and abuse include any installation, operation or maintenance of the spa other than in accordance with the instructions contained in the owner's manual provided with the spa, including but not limited to the failure to maintain proper water chemistry and chemical balance and the use of abrasive or improper cleaners or non-genuine parts and accessories. This Limited Warranty does not provide coverage for any item attached to or installed on the spa after the date of manufacture or for gaining access to any component for repair or replacement. Spa units in commercial use are excluded from any coverage whatsoever. The spa owner accepts liability for repair work performed by anyone other than the Manufacturer or a designated Coleman® Spa representative.

Limitations

The Manufacturer disclaims all warranties, expressed or implied, in fact or in law, to the extent allowed by your State's Law, including the warranty of merchantability and fitness for use, except as stated specifically herein. All warranty service must be performed by the Manufacturer or its designated representative using authorized Coleman® Spa parts. No agent, dealer, distributor, service company or other party is authorized to change, modify or extend the terms of this limited warranty in any manner whatsoever. The Manufacturer will not be responsible for any statements or representations made in any form that go beyond, are broader than, or are inconsistent with any authorized literature or specifications furnished by Coleman® Spas.

Disclaimers

The Manufacturer and its representatives shall not be liable for any injury, loss, cost or other damage, whether incidental or consequential, arising out of any defect covered by this limited warranty, including without limitation, loss of use of the spa and cost for removal of defective product even if the Manufacturer was advised of the possibility of damage. The liability of the Manufacturer under this limited warranty, if any, shall not exceed the original amount paid for the defective product. Coverage under this limited warranty shall commence as of the original date of delivery and the duration of such coverage shall not extend for any reason whatsoever beyond the stated time periods. These disclaimers shall be equally applicable to any service provided by the Manufacturer and its designated representatives.

Legal Rights

This Limited Warranty gives you specific legal rights. You may also have other rights that vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Warranty Registration

Easy Online Registration

Registering your new spa is quick and easy! It is important that you register your product as soon as possible. By taking just a few quick minutes to register, you can enjoy product alerts, more efficient support, and quicker service.

Register now -- it's fast and it's easy!

1) Go to colemanspas.com/warranty/Registration.aspx

2) Fill in your information and click "Send Warranty Info"

Locating the product serial number

The serial number of your spa is located on a metal plate attached to the inside of the door for the equipment area. You will need this number to properly register your spa and activate coverage. Write this information in the space provided below.

Spa Model: _____

Spa Serial Number: _____

Date Purchased: _____

Date Installed: _____

Dealer's Phone Number: _____

Dealer's Address: _____

Coleman Spas

LMS Customer Service Department
1462 East Ninth Street
Pomona, CA 91766

Telephone: 909-623-8781
Fax: 909-629-3890

www.colemanspas.com